WHAT IS CLAIMED IS:

1. A method for processing images to adjust for tonal degradation characteristics for a display device, the method comprising:

receiving a plurality of test pattern images;

varying a gradient of one of the plurality of test pattern images to adjust its contrast;

automatically varying gradients of other non-selected test pattern images to adjust their contrasts, wherein said variation of gradients is equally shared among the non-selected test pattern images;

repeating the varying and automatic varying steps until all test pattern images meet a predefined criteria; and

generating a LUT (look-up table) associated with the plurality of test pattern images based on determined variation in gradients.

2. The method of claim 1 wherein the predefined criteria is that all the test pattern images look alike to an operator.

3. The method of claim 1 wherein the predefined criteria is that selected contrast areas of the test pattern images are visible.

4. The method of claim 1 wherein the test pattern images include background and contrast areas.

5. The method of claim 4 wherein the step of generating a LUT further comprises using pixel values of the background area of the selected pattern image and the contrast area of the selected pattern image.

6. The method of claim 4 further comprising adjusting the contrast areas in contrast with fixed pixel values of the background areas until the test patterns look the same.

7. An apparatus for processing an image, comprising:

an image generating unit for providing a plurality of types of pattern images;

a tonal gradation conversion unit for using a lookup table to convert one or more of the plurality of pattern images into an output signal;

a display unit for converting the output signal from the tonal gradation conversion unit into a luminance value to be displayed thereon;

an input unit for inputting information relating to a pixel value of a background area of the pattern image and/or an amount of change in contrast of the pattern image;

a control unit for controlling display of the pattern image through the tonal gradation transportation unit, or for controlling display of the pattern image with the lookup table modified;

a selecting unit for selecting the pattern image presented on the display unit by inputting a confirmation signal; and

a calculating unit for calculating the lookup table from the pixel value of the background of the selected pattern image and the contrast of the selected pattern image.

8. The apparatus according to claim 7, wherein the input unit inputs coordinates on the pattern image and the amount of change in the contrast, and wherein the control unit performs control for calculating the pixel value of the background area of the pattern image based on the coordinates on the input pattern image, for invoking the pattern image from the image generating unit based on the pixel value of the background area and the amount of change in the contrast, and for displaying the pattern image on the display unit, or performs control for invoking the pattern image from the image generating unit base on the input information of the input unit and for presenting the pattern image with the lookup table modified.

9. The apparatus according to claim 7, wherein the control unit performs control for invoking a plurality of pattern images from the image generating unit based on the input information of the input unit and for displaying the pattern images on the display unit through the tonal gradation conversion unit, or performs control for invoking a plurality of pattern images from the image generating unit based on the input information of the input unit and for presenting the pattern images with the lookup table modified.

10. The apparatus according to claim 9, wherein the pattern image comprises a background area and a contrast area, arranged on the background area having a pixel value different from the pixel value of the background area.

11. The apparatus according to claim 9, wherein the pattern image is a natural image.

12. The apparatus according to claim 10, wherein the pattern image comprises a plurality of contrast areas which are different from each other in at least one of pixel value, size, and spatial frequency.

13. The apparatus according to claim 12, wherein the control unit calculates a mean pixel value of a region

containing the coordinates of the pattern image as a pixel value of the background area.

14. A method of setting tonal gradation conversion characteristics applied to an image in an image processing apparatus that processes the image displayed on a display unit, the method comprising:

an input step for selecting the image or a portion thereof, wherein the selected image or portion has a position and contrast associated with said position;

a modification step for modifying the contrast of the displayed image; and

a setting step for setting tonal gradation conversion characteristics on the image displayed on the display unit.

15. A computer program for an image processing apparatus for setting tonal gradation conversion characteristics, the computer program comprising program codes for executing:

an input step for inputting a position in the image displayed on the display unit and a contrast at the position with the position and the contrast associated with each other;

a modification step for modifying the contrast of the displayed image in accordance with the input information

input in the input step; and

a setting step for setting tonal gradation conversion characteristics on the image displayed on the display unit in accordance with the input information.